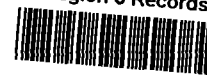


W. W. SANITATION
NEW SALEM

COMMENT LETTER - Dated October 30, 1974

EPA Region 5 Records Ctr.



350363

From a review of the comments contained in the review letter, certain modifications were proposed in the operating plan for this facility. An original plan for leachate control was to raise the invert of the fill above the groundwater level, however, this approach will significantly reduce the useful life of the facility. Therefore, it is proposed to deepen the fill and provide leachate control measures.

The cross-section sheets (4 and 5) have been revised to show a deeper fill invert. Based upon this change, the calculation of the total fill volume and available volume of cover material must be performed using the revised cross-sections. The results are as follows:

<u>AREA</u>	<u>TOTAL FILL VOLUME</u> C.Y.	<u>COVER MATERIAL</u> C.Y.
1	88,400	29,445
2	125,280	99,520
3	113,620	107,768
4	<u>70,479</u>	<u>21,279</u>
Total	397,779	258,012

Assuming a refuse to cover material volume ratio of 2.5 : 1. Considering that the estimated average weekly, in place, volume of refuse to be received is 250 cubic yards, the estimated useful life of the site is 21 years. The fill volume will require an estimated 115,400 cubic yards of cover material

as compared to approximately 258,012 cubic yards available at the site. It appears that the site will be adequate for a number of years and that sufficient cover material will be available. Cover material shall be stockpiled for repairing the final cover, and upon completion of the site, a majority of the excess cover material shall be uniformly wasted over the site.

The following replies are addressed to the comment letter of October 30, 1974:

3. The intent of the previous letter requesting the landfill invert grading plan was misunderstood. In the enclosed plans is an invert grading plan (sheet 6) of the proposed operation.

It is proposed to operate areas 2 and 3 similar to one trench. This method of operation will produce the most efficient use of the site since trench walls will not be required. Since the filling of these areas will constitute a large portion of the landfill volume, it is felt that the filling should begin in area 2 and then proceed to area 3.

The filling of area 2 shall start at the northern end and progress in a southerly direction to completion. This method of filling should be used since it will prevent the movement of vehicles over already filled areas. The trench shall be opened the width of area 2 and then progress in a southerly direction. The filling shall be performed on the northern wall of the trench

with excavation to be performed on the southern wall for cover material. The excess cover material shall be periodically removed from the southern wall to insure an adequate operating area on the floor of the trench and the excess materials stockpiled to the east on previously filled areas.

The use of this progressive type of operation produces several advantages. It will reduce cover material handling and will minimize the amount of trench surface area subject to the collection of precipitation. This operation will allow a smooth transition from operating areas since only a portion of the trench must be opened at the northern end to commence filling, as opposed to the entire trench.

The filling of area 3 shall be performed identical to that of area 2.

Surface water accumulation in the trench operating area shall be prevented by continuing the trench floor elevation to the east or west until existing ground is reached. The floor will then be self-draining and pumping will not be required. Only surface water will be allowed to leave in this manner since any contaminated water will be retained in the fill due to the proposed slope of the trench floor.

The filling in the northern end of area 2 shall provide a trench floor which drains to the east with all remaining trench areas to be drained to the west

to existing ground. This method will require the excavation through area 3 for drainage of the southern end of area 2, however, this gravity drainage will provide reliable removal of surface water from the operating area.

Items 4 and 9 - It is proposed that the leachate system be revised in accordance with your comments. The northern end of the landfill shall include a clay barrier to contain all leachate within the fill. The interface of this clay barrier shall be lined with a suitable soil additive (i.e., volclay, bentonite, etc.) to insure that seepage does not occur. The clay barriers shall be keyed into the ground below the fill to further prevent any seepage below the clay barrier. The areas directly south of the clay barrier shall be provided with a minimum of one observation well per operating area. These wells shall be used for monitoring the leachate or ground water levels and, if necessary, shall be used for leachate removal. The details for the clay barriers and the observation wells are shown on sheet 5 of the plans. Realizing that the possibility of leachate removal may arise, a contingent leachate storage and treatment plan must be developed. It is felt that the most desirable type of treatment facility would be a holding basin with irrigation type disposal. Since the leachate volume will not include any allowance for surface runoff and since the volume will only be that generated as

a result of the ground water and liquid waste disposal, it is assumed that the volume of leachate to be handled will be small. Should treatment be required for this volume of leachate, it is felt that a major portion of the treatment should be provided by a proposed holding basin which will provide an estimated four month detention of the leachate. This detention is chosen to insure that adequate storage is available, with the physical size to be determined by the volume of leachate actually leaving the fill. It is estimated that this four month detention would provide an approximate 75% reduction of the B.O.D. of the leachate. Following the detention of this water, the land application would be scheduled such that no run-off occurs and the liquid is absorbed by the soil upon application. This would require the use of the irrigation area only during summer and other periods of mild weather. The four month storage will insure that the leachate level in the fill does not become excessive during other portions of the year. Should this proposed method become necessary and the volume of leachate be too large to be handled in this method, other means of disposal will be needed. A possible consideration for long-range leachate disposal would be the use of the proposed holding basin as only a holding basin. Following the filling of this basin or on a periodic basis, the liquid in the holding basin will be removed by a septic tank truck. The tank

truck operator will provide an accepted wastewater disposal facility for these wastes and since this is the nature of his business, such an operator will be capable and agreeable to the acceptance of the leachate for disposal. Prior to the use of such a disposal method, the person with whom a contract will be made will be required to furnish satisfactory evidence to the EPA that he has adequate equipment and facilities to collect and dispose of the leachate.

The proposed holding basin would only receive leachate pumped from the observation wells and would not receive any surface run-off. The plans for this basin, should it be required, will be presented to the Illinois Environmental Protection Agency for review prior to its construction.

It is proposed to eliminate the existing leachate seeps by providing a minimum 1 foot cover on the existing seepage area, which cover shall be keyed into existing ground. This cover should provide a clay barrier which would keep the leachate in the fill. This measure along with the completion of the final cover on filled areas should reduce the leachate potential and eliminate the leachate discharge.

Item 5 - Surface water diversion berms have been modified accordingly and the traffic pattern has been outlined. The surface water diversion berms shall be a minimum of two feet high in order to prevent wash-outs and other

problems with surface water. The actual traffic pattern at the trench shall be such that the vehicles back down into the trench and then unload at or near the working face. During inclement weather it may become necessary to unload at the top of the trench at the proposed wet weather unloading area or to unload at the emergency disposal area. The traffic pattern in this area is indicated on the trench operating area detail (sheet 5). It is felt that every effort will be made to provide the unloading of the refuse at the toe of the working face. However, considering that it is a trench operation and that during inclement weather access to the working face by collection vehicles will be quite difficult, it may become necessary to unload distant from the working face. If such measures should be required, the landfill will be operated in a sanitary manner and no refuse, litter or other solid wastes will be allowed to accumulate in the new unloading area or in any other area of the landfill.

Item 7 - The liquid waste disposal area shall be operated using trenches capable of holding two weeks of liquid waste with a minimum of 18 inches of freeboard assuming no losses. Following the two week filling of the trench with the liquid waste, the incoming refuse shall be deposited in this area until it is suitable for a final cover. This period, during which refuse will be placed in the trench, shall not exceed one week, following which,

a final cover of 24 inches shall be made over the trench fill. A stockpile of earth shall be maintained within 100 feet of the trench which shall be adequate to smother any fire which may occur. It is proposed that the trenches be of the approximate sizes as shown on sheet 3 of the plans. The trenches shall be separated by a minimum of 3 feet and shall be constructed such that surface water may not enter the trench. The transport barrels for the liquid waste shall be removed daily from the disposal area. Only accumulations of one-day operations shall occur at the disposal site and suitable provisions shall be made to keep the barrels in an orderly fashion as well as to keep them from becoming unsightly.

Item 8 - Attached separately to these comments is a list of several wells which have been drilled in this area of the state. If more information than that submitted is required, please notify this office and other well drillers in the area shall be contacted.

WELL LOGS

W. W. SANITATION

PREPARED BY

HERB SCHULZ

HULL, ILLINOIS

Gary Barker (Northeast of Site)
(December 18, 1971)

<u>Depth</u>	<u>Materials</u>
0 - 12	Clay
12 - 46	Silt
46 - 54	Silt & Shale
54 - 96	Coal & Shale
96 - 145	Light Colored Shale
145 - 170	Shaley Lime
170 - 196	Sticky Shale
196 - 198	Shaley Lime
198 - 295	Lime (w/small Shale Streaks)
295 - 300	Shale

Walter Ranft

FIRST WELL

<u>Depth</u>	<u>Materials</u>
0 - 4	Topsoil
4 - 54	Yellow Clay
54 - 57	Blue Clay
57 - 68	Clay
68 - 76	Red Sand
76 - 130	Shale
130 - 160	Shale Lime

SECOND WELL (Northeast of Site)

<u>Depth</u>	<u>Materials</u>
0 - 4	Topsoil
4 - 35	Yellow Clay
35 - 39	Sand Drift
48 - 58	Light Drift
58 - 85	Light Shale
85 - 87	Drift & Gravel
87 - 104	Soft Shale
104 - 130	Burlington Lime
130 - 150	Lime

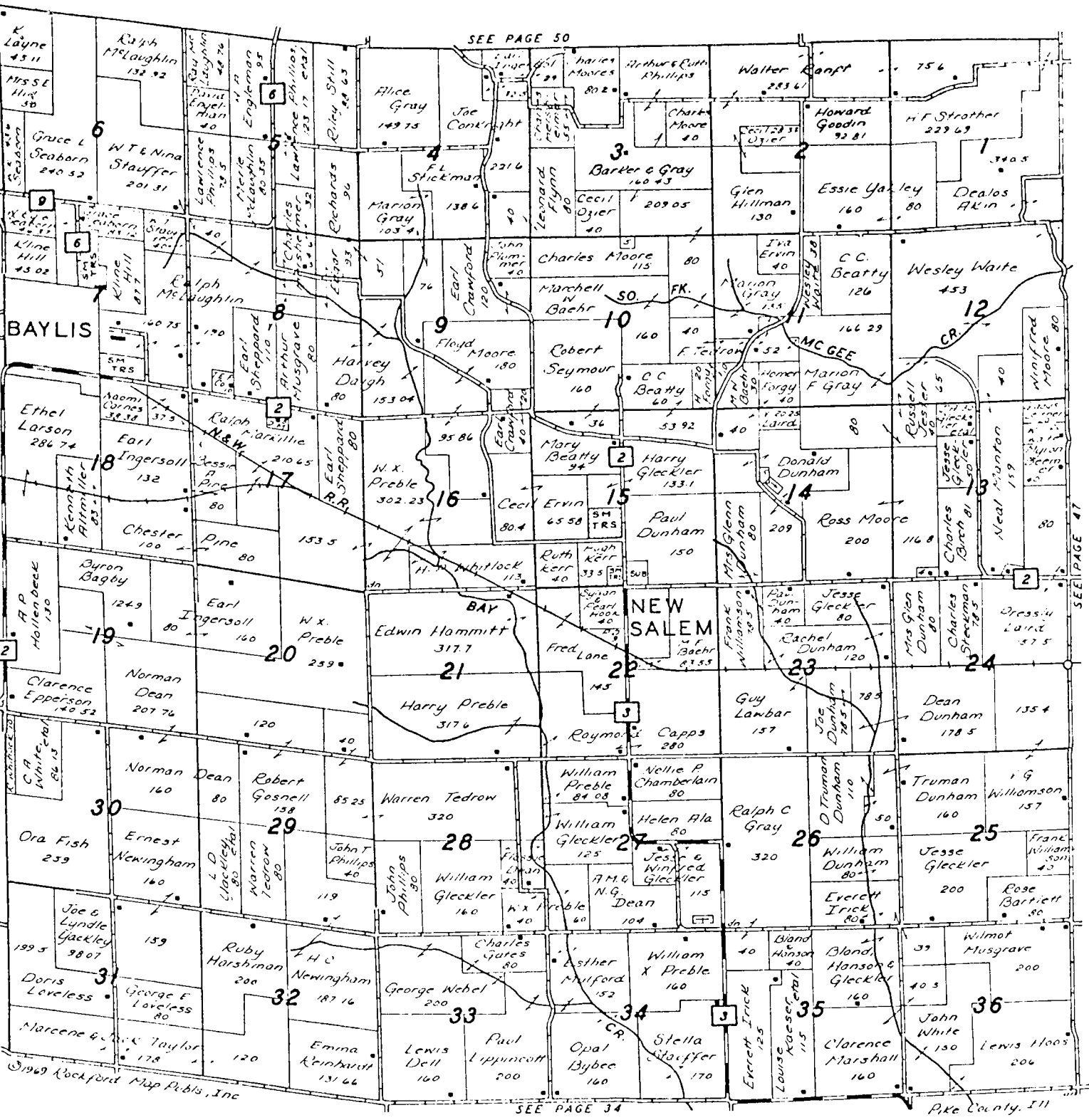
(Water at 125' - 132')

Elmer Mowen (Northwest of Location)
(August 31, 1961)

<u>Depth</u>	<u>Materials</u>
0 - 30	Clay Silt
30 - 55	Light Shale
55 - 65	Dark (Oily)(Coal) Shale
65 - 150	Lime (Hard)
150 - 160	Broken Lime

Howard Goodin (South of Location)
(New Salem)

<u>Depth</u>	<u>Materials</u>
0 - 3	Topsoil
3 - 35	Clay
35 - 38	Drifts
38 - 100	Blue Clay
100 - 104	Sand Drift
104 - 110	Shale



PITTSFIELD COMMUNITY SALE BARN

THREE SALES EVERY WEEK

TUESDAY - SLAUGHTER HOGS - A.M. - SHOATES - P.M.

THURSDAY - CATTLE - P.M.

SATURDAY - SLAUGHTER HOGS - A.M.

PHONE: 285-2184 - 285-2185

EVANS

VENABLE

CURLISS

